

In the claims:

Please amend the claims as indicated below.  
Deleted text is struck through, added text is underlined.

1. (currently amended) A circuit board for mounting circuit components, the circuit board comprising:

traces of electrically conductive material disposed on at least one side of the circuit board for electrically interconnecting the circuit components mounted on the circuit board; and

at least one female interlocking element on at least one edge of the circuit board for interlocking with a male interlocking element of a circuit board connector that connects the circuit board with another circuit board, wherein the circuit board is connected to another circuit board for a first half part of the male interlocking element of the circuit board connector inserted into the female interlocking element of the circuit board from one side of the circuit board and a second half part of the male interlocking element of the circuit board connector inserted into a female interlocking element of the another circuit board from one side of the another circuit board, to form a larger circuit board.

2. (original) The circuit board of claim 1, further comprising:

through-holes disposed on the circuit board for mounting through-hole circuit components on the circuit board, the traces electrically interconnecting two or more of the through-hole circuit components.

3. (original) The circuit board of claim 2, wherein the through-hole circuit component is one selected from the group consisting of a resistor, a capacitor, an inductor, a crystal, a header, a jumper wire, a fuse, a transistor, a voltage regulator, a Dual In-Line package integrated circuit, a Dual In-Line package switch, a relay, an RJ11 connector, an RJ45 connector, a drive power connector, a power jack, an ATX power connector, an audio RCA jack, a DB 25 connector, a JTAG connector, an IEEE 1394 Firewire connector, an RGB connector, and a USB connector..

4. (original) The circuit board of claim 2, wherein the through-holes are disposed in an array, and the through-holes in a first row of the array are positioned with a predetermined offset in relation to the positions of the through-holes in a second row of the array adjacent to the first row.

5. (original) The circuit board of claim 1, further comprising:

at least one surface-mount pad disposed on one side of the circuit board for mounting a surface-mount circuit component on the circuit board.

6. (original) The circuit board of claim 5, wherein the surface-mount circuit component is one selected from the group consisting of a 6063 package integrated circuit, a 0805 package integrated circuit, a CASE-A package integrated circuit, a CASE-B package integrated circuit, a SOD-123 package integrated circuit, a SOT-23 package integrated circuit, a SOT-223 package integrated circuit, a SO package integrated circuit, a SOP package integrated circuit, a QSOP

package integrated circuit, a SSOP package integrated circuit, a TSSOP package integrated circuit, a PSSOP package integrated circuit, a QFP package integrated circuit, a TQFP package integrated circuit, a PQFP package integrated circuit, and PLCC package integrated circuit.

7. (original) The circuit board of claim 1, further comprising:

at least one surface-mount pad disposed on one side of the circuit board for mounting a surface-mount circuit component on the circuit board; and

through-holes disposed on the circuit board for mounting through-hole circuit components on the circuit board, the traces electrically interconnecting two or more of the surface-mount circuit component and the through-hole circuit components.

8. (original) The circuit board of claim 7, wherein the traces interconnect the surface-mount circuit component to the outer edges of the circuit board via the through-holes.

9. (currently amended) The circuit board of claim 7, wherein an end of the trace is ~~titled~~ tilted by 45 degrees.

10. (original) The circuit of claim 1, comprising four female interlocking elements on each edge of the circuit board, the female interlocking elements for interlocking with corresponding male interlocking elements of the circuit board connector.

11. (original) The circuit board of claim 1, wherein a half-part of the male interlocking element of the circuit board connector is inserted into the female interlocking element of the circuit board from one side of the circuit board.

12. (original) The circuit board of claim 1, wherein the female interlocking element has a shape including a substantially straight portion open at the edge of the circuit board and a substantially rounded portion connected to the straight portion.

13. (cancelled)

14. (original) A circuit board connector for connecting a first circuit board with a second circuit board, the first circuit board and the second circuit board for mounting circuit components thereon and having at least a first female interlocking element and a second female interlocking element, respectively, the circuit board connector comprising:

    a body having a cross-section that is rectangular with two parallel edges substantially longer than the other two parallel edges; and

    at least one male interlocking element connected to the body, a first half part of the male interlocking element capable of being inserted into the first female interlocking element and a second half part of the male interlocking element capable of being inserted into the second female interlocking element to mechanically connect the first and second circuit boards.

15. (original) The circuit board connector of claim 14, wherein the first and second half parts of the male interlocking element are capable of being inserted into the first and second female interlocking elements, respectively, from one side of the first and second circuit boards to provide backing support for the mechanically connected first and second circuit boards.

16. (original) The circuit board connector of claim 14, comprising four male interlocking elements connected to the body.

17. (original) The circuit board connector of claim 14, wherein the male interlocking element includes a first substantially rounded portion, a second substantially rounded portion, and a substantially straight portion between the first and second substantially rounded portions, the first half part of the male interlocking element being comprised of the first substantially rounded portion and a first half of the straight portion connected to the first substantially rounded portion, and the second half part of the male interlocking element comprised of the second substantially rounded portion and a second half of the straight portion connected to the second substantially rounded portion.

18-21. (cancelled)

22. (original) A circuit board connector for connecting a first circuit board with a second circuit board, the first circuit board and the second circuit board for mounting circuit components thereon and having at least a first female interlocking means and a second female interlocking means, respectively, the circuit board connector comprising:

a body means for providing backing support for the connected first circuit board and the second circuit board;  
and

male interlocking means connected to the body means, a first half part of the male interlocking means capable of being inserted into the first female interlocking means and a second half part of the male interlocking means capable of being inserted into the second female interlocking means to mechanically connect the first and second circuit boards.

23. (original) The circuit board connector of claim 22, wherein the first and second half parts of the male interlocking means are capable of being inserted into the first and second female interlocking means, respectively, from one side of the first and second circuit boards to provide backing support for the connected first and second circuit boards.

24. (original) The circuit board connector of claim 22, comprising four male interlocking means connected to the body means.

25. (original) A method of forming a circuit board using a first circuit board, a second circuit board, and a circuit board connector, the first circuit board having at least a first female interlocking element, the second circuit board having at least a second female interlocking element, and the circuit board connector having at least a male interlocking element, the method comprising:

mounting at least a first circuit component on the first circuit board;

mounting at least a second circuit component on the second circuit board;

inserting a first half part of the male interlocking element into the first female interlocking element; and

inserting a second half part of the male interlocking element into the second female interlocking element to mechanically connect the first and second circuit boards to form the circuit board.